

ABSTRACT OF THE DISCLOSURE

A system and method for generating a local oscillator (LO) frequency in a zero intermediate frequency (IF) receiver or transmitter is presented. A signal is received from a voltage controlled oscillator (VCO). The signal has a VCO frequency. The VCO frequency is divided by a number N to produce a signal having a divided-down frequency. The signal having the VCO frequency is then mixed with the signal having the divided-down frequency to produce an output signal having an output frequency. Local oscillator leakage is reduced. Thus, the receiver or transmitter may operate in multiple wireless communication bands and modes and meet the associated specifications.